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Form PCT/IB/373 (January 2004)

#### PATENT COOPERATION TREATY

### **PCT**

#### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference 0000054384	FOR FURTHER ACTION	See item 4 below			
International application No. PCT/EP2004/003845	International filing date (day/month/year) 13 April 2004 (13.04.2004)	Priority date (day/month/year) 16 April 2003 (16.04.2003) ]			
International Patent Classification (IPC) or national classification and IPC  C12N 15/09, C12P 7/64					
Applicant BASF PLANT SCIENCE GMBH					

1.	This international preliminary International Searching Author		er I) is issued by the International Bureau on behalf of the	
2.	This REPORT consists of a tol	rence to the written opinion of	the International Searching Authority should be read as a reference	
	to the international preliminary	report on patentability (Chap	ter I) instead.	
3.	This report contains indication	s relating to the following item	ıs:	
	Box No. I	Basis of the report		
	Box No. II	Priority		
	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability		
	Box No. IV	Lack of unity of invention		
	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
	Box No. VI	Certain documents cited		
	Box No. VII	Certain defects in the international application		
	Box No. VIII	Certain observations on the international application		
4.			gnated Offices in accordance with Rules 44bis_3(c) and 93bis.1 but er Article 23(2), before the expiration of 30 months from the priority	
·			Date of issuance of this report 21 October 2005 (21.10.2005)	
	The International Bur 34, chemin des Co 1211 Geneva 20, S	lombettes	Authorized officer Agnes Wittmann-Regis	
Facsin	nile No. +41 22 740 14 35		Telephone No. +41 22 338 89 70	

### PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY				REC'D 28 JUL	2004	
To: see form PCT/ISA/220				THET -	PCT	
			INTERNATION	TEN OPINION O NAL SEARCHING PCT Rule 43 <i>bis</i> .1	G AUTHORITY	
			Date of malling . (day/month/year) see	e form PCT/ISA/210 (seco	and sheet)	
1 ''	Applicant's or agent's file reference see form PCT/ISA/220			FOR FURTHER ACTION See paragraph 2 below		
	International application No. International filing date (c PCT/EP2004/003845 13.04.2004			Priority date (day/month	h/year)	
International Patent Clas C12N15/09, C12P7		both national classification	and IPC			
Applicant BASF PLANT SCIE	NCE GMBH					
1. This opinion contains indications relating to the following items:    Box No.   Basis of the opinion						
Name and malling address	of the ISA;		Authorized Officer		Number between	
European P D-80298 Mi Tel. +4 9 80		56 epmu <b>d</b>	Bilang, J	0000 0707		

## WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No. PCT/EP2004/003845

Box No. I Basis of the opinion					
<ol> <li>With regard to the language, this opinion has been established on the basis of the International application in the language in which it was field, unless otherwise indicated under this item.</li> </ol>					
This opinion has been established on the basis of a translation from the original language into the following language, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).					
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:					
a. type of material:					
☐ a sequence listing					
□ table(s) related to the sequence listing					
b. format of material:					
☑ in written format					
☑ in computer readable form					
c. time of filing/furnishing:					
☐ contained in the international application as filed.					
filed together with the international application in computer readable form.					
furnished subsequently to this Authority for the purposes of search.					
In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.					
. Additional comments:					

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NO. 3590 P. 7

### WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No. PCT/EP2004/003845

_	Вο	x No. II	Priority	•			
1.		The fol	lowing document h	as not be	en fumishe	ed:	÷ -
			copy of the earlier	application	n whose p	riority has b	een claimed (Rule 43 <i>bis</i> .1 and 66.7(a)).
			translation of the	earlier app	ilication wh	ose priority	has been claimed (Rule 43 <i>bis</i> .1 and 66.7(b)).
		Consecutive neverth	quently it has not b leless been establi	een possil shed on th	ble to cons ne assump	ider the valid tion that the	dity of the priority claim. This opinion has relevant date is the claimed priority date.
2.		has be	inion has been est en found invalid (R ate indicated above	ules 43 <i>bis</i>	t and 64.	i). Thus for	n claimed due to the fact that the priority claim the purposes of this opinion, the international date.
3.	Ado	litional o	bservations, if nec	essary:			
		see se	parate sheet				
			•				
		c No. V ustrial a	Reasoned state pplicability; citati	ment und ons and o	ler Rule 40 explanatio	B <i>bis</i> .1(a)(i) v	vith regard to novelty, inventive step or ing such statement
1.	Stat	tement					
	Nov	etty (N)		Yes: No:	Claims Claims	1-4 5-10	
	Inve	ontive sta	ep (IS)	Yes: No:	Claims Claims	1-10	
	Indu	istrial ap	plicability (IA)	Yes: No:	Claims Claims	1-10	

2. Citations and explanations see separate sheet

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# WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (SEPARATE SHEET)

International application No.

PCT/EP2004/003845

- The present application is concerned with a method of increasing the total oil content in a plant organism, comprising the transgenic expression of an acyltransferase, and genetic constructs useful therefore.
   The priority of European Application 03008909, filed 16.04.2003, is validly claimed
- 2. Reference is made to the following documents:
  - D1 WO00/18889
  - D2 Jain et al., Biochemical Society Transactions, vol. 28, part 6, 2000, p. 958-961
  - D3 Jako et al., Plant Physiology, vol. 126, June 2001, p. 861-874
  - D4 Taylor et al., Molecular Breeding, vol. 8, 2001, p. 317-322

The proteins used in the present invention are known in the art. However, only the protein having SEQ ID NO: 2 was identified as acyltransferase (D1).

- 3. D1 discloses vectors for expressing the acyltransferase in plant cells and plant cells comprising the acyltransferase (p. 11, I. 20- p. 12, I. 3). D1 thus anticipates the subject-matter of claims 5-10 (Article 33(3) PCT).
- 4. It was known that plants transformed with acyltransferase have an increased oil content (D2-D4). The skilled person thus would not be surprised that the expression of the acyltransferase of D1 also results in an increased oil content. The subject-matter of claims 1-4 therefore is not considered to be based on an inventive activity (Article 33(2) PCT).

PTC/SE/97 (09-04)
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Application No. (if known): 10/553,303 Attorney Docket No.: 12810-00153-US

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